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EXAMINER	
PATEL, MAHENDRA R	
ART UNIT	PAPER NUMBER
4172	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/571,607	PESIA ET AL.	
	Examiner	Art Unit	
	MAHENDRA R. PATEL	4172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/12/2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03/10/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/10/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to application filed on 01/12/2007.

Claims 1-13 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 20020054578 A1), in view of Menon et al. (US 20020048268 A1).

Regarding claim 1, Zhang teaches a method of optimizing the use of radio resources in a mobile radio communication system during a combinational multimedia session involving circuit switched and packet switched sessions between user terminals associated with respective radio

network control nodes ([0004] (e.g. The third generation (3G) system is designed for high-speed multimedia data (i.e. packet switched session) and voice (i.e. circuit switched session). Its goals include high-quality audio and video transmission (i.e. combinational multimedia and voice sessions between two user terminals) and advanced global roaming, which means being able to go anywhere and automatically be handed off to whatever wireless system is available (i.e. user terminals (nodes), in-house phone system, cellular, satellite, etc.))),

Where signals are transported over two radio links ([0004] (e.g. its goals include high-quality audio and video transmission (i.e. signals are transported over two radio links))),

the method comprising: at a sending radio network control node, disabling an in-sequence delivery option of packets between the radio network control nodes of the radio access network(s) serving the user terminals for said packet switched session ([0185] (e.g. Total available throughput, bit/frame /packet error rate (in a 3G packet switch network), and some other network related information are fed back to the sender (i.e. originating user terminal) to achieve the minimal objective e.g., distortion or power consumption (i.e. control module at sending node momentarily disabling transmitter to stop an in-sequence delivery option of packets to save power consumption). Given the network information, optimal resource allocation is then performed. The channel decoder reconstructs packets through a channel decoding process. For ELs, the output of the channel decoder is directed for source decoding; while for BLs, if residual error still exists, the receiver (i.e. receiving terminal) decides whether to send a retransmission request based on the delay bound of the packet. If the delay bound has expired, the request will not be sent)).

Zhang does not expressly teach that the signals can be transported over two cascaded radio links.

However, the preceding limitation is known in the art of communications. In the same field of endeavor, Menon teaches cascaded radio links ([0189, 0190] (e.g. the Network management architecture for a BSS is based on the ETSI GSM (Global System for Mobile communication) series standard, such that the management functionality is cascaded as shown in FIG. 14 (i.e. Fig 13-21. management functionality includes management of network nodes in a wireless access network, Management of communication protocols, Management of data and circuit switching signaling plane, etc.). Embodiment BSS management architecture for a wireless access system generally results from supporting a GSM Abis interface between a WARP and a base station. In an embodiment, the Simple Network Management Protocol (SNMP) is used for managing the WARPs and base stations from the OMC of the wireless access system).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invitation to implement the method of Menon within the method of Zhang to allow two or more communication interface techniques in a wireless network. The new method gives flexibility and hence versatile network. The new method speed-up network traffic flow and making it easier to manage.

Regarding claim 2, Zhang in view of Menon teaches all the limitations above. Zhang further teaches the method of claim 1, wherein said packets are Service Data Units, assembled at the RLC layer of the sending side radio network controller, from Protocol Data Units ([0126] (e.g. The Radio Link Control (RLC) sub-layer of the Data Link Layer provides three types of modes for data delivery (i.e. data packet sending), among which, the transparent mode transmits

higher layer Protocol Data Units (PDUs) only with segmentation/reassembly functionality (i.e. Service Data packet assembling protocol at the RLC layer of the sending side of radio network controller))).

Regarding claim 3, Zhang in view of Menon teaches all the limitations above. Zhang further teaches the method of claim 1, wherein said packets are Radio Link Control Protocol Data Units which are tunneled from the sending side radio network controller to the receiving side radio network controller, the Protocol Data Units being assembled at the receiving side terminal into Radio Link Control Service Data Units ([0123, 0124, 0125] (e.g. The Radio Resource Control (RRC) sub-layer of the Data Link Layer interacts with lower layers to provide local inter-layer control services (i.e. Radio Link Control Protocol Data Units), such as determining the transport format combination set (TFCS), for efficient usage of transport channels (i.e. Tunnels from the originating side radio controller to the receiving side radio controller). All information sent and received by a user is transported via the user plane. Application data is first packetized (i.e. Protocol Data Units being assembled) and then transported using the TCP/UDP transport protocol (i.e. Protocol Data Units being assembled at the originating terminal, and then transported thru tunnel to the receiving side terminal))).

3. **Claims 4-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 20020054578 A1), in view of Menon et al. (US 20020048268 A1),

Regarding claim 4, Zhang teaches a method of operating a radio network controller of a mobile communications network, the method comprising disabling an in-sequence delivery

option for packets sent from the radio network controller to another radio network controller and associated with a packet switched session between two or more user terminals ([0004] (e.g. The third generation (3G) system is designed for high-speed multimedia data (i.e. packet switched session) and voice (i.e. circuit switched session). Its goals include high-quality audio and video transmission (i.e. combinational multimedia and voice sessions between two user terminals))); ([0185] (e.g. Total available throughput, bit/frame /packet error rate (in a 3G packet switch network), and some other network related information are fed back to the sender (i.e. originating user terminal) to achieve the minimal objective e.g., distortion or power consumption (i.e. control module at sending node momentarily disabling transmitter to stop an in-sequence delivery option of packets to save power consumption). Given the network information, optimal resource allocation is then performed. The channel decoder reconstructs packets through a channel decoding process. For ELs, the output of the channel decoder is directed for source decoding; while for BLs, if residual error still exists, the receiver (i.e. receiving terminal) decides whether to send a retransmission request based on the delay bound of the packet. If the delay bound has expired, the request will not be sent)).

Zhang does not expressly teach that the signals can be transported over two cascaded (i.e. in-sequence or in series) radio links.

However, the preceding limitation is known in the art of communications. In the same field of endeavor, Menon teaches cascaded radio links ([0189, 0190] (e.g. the Network management architecture for a BSS is based on the ETSI GSM (Global System for Mobile communication) series standard, such that the management functionality is cascaded as shown in FIG. 14 (i.e. Fig 13-21. management functionality includes management of network nodes in a

wireless access network, Management of communication protocols, Management of data and circuit switching signaling plane, etc.). Embodiment BSS management architecture for a wireless access system generally results from supporting a GSM Abis interface between a WARP and a base station. In an embodiment, the Simple Network Management Protocol (SNMP) is used for managing the WARPs and base stations from the OMC of the wireless access system).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invitation to implement the method of Menon within the method of Zhang to allow two or more communication interface techniques in a wireless network. The new method gives flexibility and hence versatile network. The new method speed-up network traffic flow and making it easier to manage.

Regarding claim 5, Zhang in view of Menon teaches all the limitations above. Menon further teaches the method of claim 4, the in-sequence delivery option being an option of the Radio Link Control layer ([0146] (e.g. The subscriber services provided by the systems, i.e., voice, fax and packet data services, are not specific to wireless access, and can be offered to end users as subscription options (i.e. if service is not enabled, then RLC layer will not transmit service data))).

Regarding claim 6, Zhang in view of Menon teaches all the limitations above. Zhang further teaches the method of claim 5, wherein said packets are Radio Link Control Service Data Units ([0123, 0124] (e.g. The Radio Resource Control (RRC) sub-layer of the Data Link Layer interacts with lower layers to provide local inter-layer control services (i.e. Radio Link Control Protocol Data Units), such as determining the transport format combination set (TFCS), for efficient usage of transport channels)).

Regarding claim 7, Zhang in view of Menon teaches all the limitations above. Zhang further teaches the method of claim 5, wherein said packets are Radio Link Control Protocol Data Units which are tunneled from the sending side radio network controller to the receiving side radio network controller ([0123, 0124, 0125] (e.g. The Radio Resource Control (RRC) sub-layer of the Data Link Layer interacts with lower layers to provide local inter-layer control services (i.e. Radio Link Control Protocol Data Units), such as determining the transport format combination set (TFCS), for efficient usage of transport channels (i.e. Tunnels from the originating side radio controller to the receiving side radio controller). All information sent and received by a user is transported via the user plane. Application data is first packetized (i.e. Protocol Data Units being assembled) and then transported using the TCP/UDP transport protocol (i.e. Protocol Data Units being assembled at the originating terminal, and then transported thru tunnel to the receiving side terminal)).

4. **Claims 8, 10-12 are** rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 20020054578 A1), in view of Menon et al. (US 20020048268 A1).

Regarding claim 8, Zhang teaches a method of optimizing the use of radio resources in a mobile radio communication system during a combinational multimedia session involving circuit switched and packet switched sessions between user terminals ([0004] (e.g. The third generation (3G) system is designed for high-speed multimedia data (i.e. packet switched session) and voice (i.e. circuit switched session). Its goals include high-quality audio and video transmission (i.e. combinational multimedia and voice sessions between two user terminals) and

advanced global roaming, which means being able to go anywhere and automatically be handed off to whatever wireless system is available (i.e. user terminals (nodes), in-house phone system, cellular, satellite, etc.))),

Zhang does not expressly teach that the network node management protocols. However, the preceding limitation is known in the art of communications. In the same field of endeavor, Menon teaches the network node management protocols ([0185] (e.g. the network node management protocols, i.e., SNMP, FTP and MFTP, is a Transmission Control Protocol (TCP)/Internet Protocol (IP) channel, or connection, for the transfer of management data requiring a secure, i.e., reliable, transmission path. The TCP layer and IP layer of the node manager protocol stack and the TCP layer and IP layer of the node element protocol stack support secure TCP/IP channels for the transmission of management messages (i.e. data packets) between the nodes)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invitation to implement the method of Menon within the method of Zhang to allow two or more communication interface techniques in a wireless network. The new method gives flexibility and hence versatile network. The new method speed-up network traffic flow and making it easier to manage.

Regarding claim 10, Zhang in view of Menon teaches all the limitations above. Zhang further teaches the method of claim 8, wherein said TCP sending parameters are segment size and/or initial window size ([0124] (e.g. All information sent and received by a user is transported via the user plane. Application data is first packetized (i.e. segment size) and then

transported using the TCP/UDP transport protocol. For multimedia delivery, UDP protocol is used)).

Regarding claim 11, Zhang in view of Menon teaches all the limitations above. Menon further teaches the method of claim 10 and comprising setting the TCP sending parameters such that the TCP sending window is greater than the size of the media to be sent ([0198] (e.g. The OMC protocol stack comprises an SNMP layer, a TCP/UDP layer supporting UDP functionality and an IP layer (i.e. TCP sending window is greater than the size of the media to be sent as a part of the protocol architecture).

Regarding claim 12, Zhang in view of Menon teaches all the limitations above. Menon further teaches the method of claim 10, wherein the setup of setting the TCP window size comprises increasing the window size relative to that used for non-combinational multimedia session related packet traffic sent ([0198] (e.g. The OMC protocol stack comprises an SNMP layer, a TCP/UDP layer supporting UDP functionality and an IP layer (i.e. TCP window size increasing the relative to that packet traffic sent as a part of the protocol architecture).

5. **Claims 9, 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 20020054578 A1), in view of Menon et al. (US 20020048268 A1).

Regarding claim 9, Zhang teaches a method of operating a user terminal of a mobile radio communication system ([0004] (e.g. the third generation (3G) system is designed for high-speed multimedia data (i.e. packet switched session) and voice (i.e. circuit switched session). Its

goals include high-quality audio and video transmission (i.e. combinational multimedia and voice sessions between two user terminals),

Zhang does not expressly teach that the network node management protocols. However, the preceding limitation is known in the art of communications. In the same field of endeavor, Menon teaches the network node management protocols ([0185] (e.g. the network node management protocols, i.e., SNMP, FTP and MFTP, is a Transmission Control Protocol (TCP)/Internet Protocol (IP) channel, or connection, for the transfer of management data (i.e. sending parameters for a packet switched session) requiring a secure, i.e., reliable, transmission path. The TCP layer and IP layer of the node manager protocol stack and the TCP layer and IP layer of the node element protocol stack support secure TCP/IP channels for the transmission of management messages (i.e. data packets) between the nodes)); ([0086] (e.g. The private IP network is a managed IP network wherein resource management (i.e. managing resources for combinational multimedia and voice sessions so as to optimize radio resource usage) and Quality of Service (QoS) aspects of the system services are controlled. the private IP network provides wire line interfaces to one or more access routers, one or more H.323 gateways (i.e. wireless interface) , one or more fax gateways, one or more packet data gateways (i.e. setting one or more TCP sending parameters for a packet switched session so that data traffic is transport effectively, that may include changing TCP parameters used in a non-combinational multimedia session) , including one or more Internet gateways, and one or more H.323 gatekeepers of the system)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invitation to implement the method of Menon within the method of Zhang to allow two or more communication interface techniques in a wireless network. The new method gives flexibility and

hence versatile network. The new method speed-up network traffic flow and making it easier to manage network.

Regarding claim 13, Zhang in view of Menon teaches all the limitations above. Zhang further teaches the method of claim 9, wherein said TCP sending parameters are segment size and/or initial window size ([0124] (e.g. All information sent and received by a user is transported via the user plane. Application data is first packetized (i.e. segment size) and then transported using the TCP/UDP transport protocol. For multimedia delivery, UDP protocol is used)).

Conclusion

6. The prior arts are made of records and not relied upon is considered pertinent to applicant's disclosure.

1. Cuny et al. (US 20030179720 A1) - Congestion control in wireless telecommunication networks.
2. Abraham et al. (US 20030156580 A1) - Rate control system and method for a link within a wireless communications system.
3. Ahmavaara et al. (US 20050101245 A1) - Access system for a cellular network.
4. Willenegger et al. (US 20030207696 A1) - Multi-media broadcast and multicast service (MBMS) in a wireless communications system.

5. Parantainen et al. (US 7054268 B1) - Method and arrangement for transferring information in a packet radio service with application-based choice of release mode.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAHENDRA R. PATEL whose telephone number is 571-270-7499. The examiner can normally be reached on 8:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis West can be reached on 571-272-7859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MAHENDRA R PATEL/
Examiner, Art Unit 4172
/ Jean A Gelin/
Primary Examiner, Art Unit 2617
Wednesday, January 07, 2009